

## IN THE CLAIMS

1. (Currently amended) An apparatus for manufacturing a semiconductor device, the apparatus comprising:

a chamber having a gas inlet and a gas outlet, said chamber having an upper part with a dome configuration;

a susceptor provided in said chamber to permit a wafer to be placed thereon; and

a non-mesh plasma electrode to which RF power is applied to generate a plasma within said chamber;

wherein said plasma electrode is of a truncated dome shape to cover said upper part, wherein the electrode has a lower opening and an upper opening, and wherein a diameter of the upper opening is greater than about one third of a diameter of the lower opening to form a thin film having a uniform thickness.

2. (Currently amended) The semiconductor device manufacturing apparatus according to claim 1, said upper opening has a width of about 70mm to 300mm.

3. (Currently amended) A thin film forming method using a semiconductor device manufacturing apparatus comprising a chamber having a gas inlet and a gas outlet, said chamber having an upper part with a dome configuration, a susceptor provided in said chamber to permit a wafer to be placed thereon, and a non-mesh plasma electrode to which RF power is applied to generate plasma within said chamber, wherein said plasma electrode is of a truncated dome shape to cover said upper part, wherein the electrode has a lower opening and an upper opening, and wherein a diameter of the upper opening is greater than about one third of a diameter of the lower opening;

applying said plasma electrode with RF power of about 700W to 1000W when using a hydrogen containing plasma to form a  $\text{Si}_x\text{N}_y$  thin film having a uniform thickness.

4. (Previously presented) The thin film forming method according to claim 3, said hydrogen containing plasma is formed by a gas mixture of  $\text{SiH}_4$  and  $\text{NH}_3$ .

5. (Currently amended) A thin film forming method using a semiconductor device manufacturing apparatus comprising a chamber having a gas inlet and a gas outlet, said chamber having an upper part with a dome configuration, a susceptor provided in said

chamber to permit a wafer to be placed thereon, and a non-mesh plasma electrode to which RF power is applied to generate plasma within said chamber, wherein said plasma electrode is of a truncated dome shape to cover said upper part, wherein the electrode has a lower opening and an upper opening, and wherein a diameter of the upper opening is greater than about one third of a diameter of the lower opening;

applying said plasma electrode with RF power of about 500W to 1000W when using a hydrogen containing plasma to form a DLC thin film or SiC thin film having a uniform thickness.

6. (Previously presented) The thin film forming method according to claim 5, said hydrogen containing plasma is formed by a gas mixture of CH<sub>4</sub> and H<sub>2</sub> when forming said DLC thin film, and by a gas mixture of SiH<sub>4</sub>, CH<sub>4</sub> and H<sub>2</sub> when forming said SiC thin film.

7. (Previously presented) The apparatus of claim 1, wherein the inner diameter of the electrode gradually becomes smaller from the bottom of the electrode toward the top of thereof.

8. (New) An apparatus for manufacturing a semiconductor device, the apparatus comprising:

a chamber having a gas inlet and a gas outlet, said chamber having an upper part with a dome configuration;

a susceptor provided in said chamber to permit a wafer to be placed thereon; and

a non-mesh plasma electrode to which RF power is applied to generate a plasma within said chamber;

wherein said plasma electrode is of a dome shape to cover said upper part, wherein the electrode has an upper opening sized to deposit a thin film having a uniform thickness on a wafer.

9. (New) The semiconductor device manufacturing apparatus according to claim 8, said upper opening has a diameter of about 70mm to 300mm.

10. (New) The semiconductor device manufacturing apparatus according to claim 1, wherein the plasma electrode has a lower opening and an upper opening, and wherein a diameter of the upper opening is about two fifths of a diameter of the lower opening.